

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7266

Petition of David R. and Cathy J. Montagne for a)
certificate of public good pursuant to 30 V.S.A.)
§ 248(j) for a farm-based methane-fueled electrical)
generating facility in Saint Albans, Vermont)

Order entered: 6/8/2007

I. INTRODUCTION

This case involves a petition filed on December 12, 2006, by David R. and Cathy J. Montagne (the "Montagnes") requesting a certificate of public good ("CPG") under 30 V.S.A. § 248(j) for approval of a methane-fueled electrical generating facility located on their dairy farm in St. Albans, Vermont (the "Project"). The Montagnes submitted prefiled testimony, a proposed CPG, and proposed findings pursuant to the requirements of Section 248(j). They submitted a revised proposed CPG on May 1, 2007.

On January 8, 2007, the Clerk of the Board sent a letter to counsel for the Montagnes requesting more information about the project. The Montagnes responded by letter dated January 16, 2007.

Notice of the filing was sent on February 6, 2007, to all entities specified in 30 V.S.A. § 248(a)(4)(c) and all other interested parties. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before March 8, 2007. A similar notice of the filing was published in the Saint Albans Messenger on February 8, 2007, and February 15, 2007.

Comments were received from Central Vermont Public Service Corporation ("CVPS"), filed on February 12, 2007, and the Vermont Department of Public Service ("Department"), filed on March 7, 2007. CVPS commented on the timing of the construction process. The

Department submitted a determination pursuant to 30 V.S.A. § 202(f) that the project is consistent with the State's Twenty-Year Electric Plan. The Department stated that it supports approval of the Montagnes' petition, subject to the Board's inclusion of certain conditions, as discussed below.

On March 8, 2007, the Montagnes submitted a letter advising the Board of the potential that the route for the CVPS distribution line needed to connect the Project to CVPS's electrical system may need to be revised due to difficulty in procuring a necessary easement. On April 10, 2007, the Montagnes confirmed that a new route for the distribution line would be required but stated their view that the change did not amount to a substantial change to the Project.

On April 27, 2007, the Montagnes filed Supplemental Testimony and Exhibits of Timothy Upton of CVPS describing the new route for the upgraded distribution line.

The Board has determined that the proposed construction will be of limited size and scope and that the petition has effectively addressed the issues raised with respect to the substantive criteria of 30 V.S.A. § 248. Consequently, we find that the procedures authorized by Section 248(j) are sufficient to satisfy the public interest, and no hearings are required.

II. FINDINGS

1. The Montagnes own and operate a large dairy operation on two farms in Saint Albans, Vermont. Montagne pf. at 1.
2. The Montagnes propose to construct and operate an electrical generating facility which would use the methane gas derived by processing the farm's cow manure in an enclosed anaerobic digester located on the farm. The generator would produce approximately 240 kilowatts of electricity which would be sold to CVPS as part of its voluntary renewable pricing "CVPS Cow Power™" program. *Id.*
3. The Project would consist of the construction of two buildings: a concrete enclosed manure digester (approximately 74' x 120' x 16'); and a building to house the generator (approximately 48' x 120'). Most of the digester would be buried, with only the cover of the structure (about two feet) above ground. The buildings would be placed among existing farm buildings adjacent to the manure pit. The design and appearance of the buildings would be

compatible with other nearby large farm buildings. Montagne pf. at 2; Dvorak pf. at 2; exh. DRM-2.

4. The digester would process the cow manure of the 1,200 cows on the Montagnes' two farms. The manure would be transferred from the manure pit to the digester to be mixed and heated. The decomposition of the raw manure would produce methane gas, which would fuel a reciprocating engine. That in turn would run a generator and produce electricity. Montagne pf. at 2; Dvorak pf. at 2-4.

5. The digester would reduce the odor and pathogens contained in the liquid and solid waste by-products of the decomposition process. The solids would be dried and used as bedding for the farm's cows in place of sawdust, which would allow the Montagnes to save on the cost of sawdust. Because sawdust contains phosphorous, replacing sawdust with solids for bedding should reduce the amount of phosphorous released into the environment. The liquid waste by-product would be spread on the crops as fertilizer. Because much of the organic nitrogen would have been converted to ammonia during the digestion process, the liquid to be spread would be better for crops and would reduce the risk of ground and surface water contamination compared to current practice. The liquid waste would also have less odor as compared to current practice. *Id.*

6. The generator would be purchased from GHD, Inc., a Wisconsin company which has installed farm methane generator systems on many farms, including the Blue Spruce Farm in Bridport, Vermont. Dvorak pf. at 1-2.

7. The distribution line upgrade would be built entirely on land owned by the Montagnes, and would consist of approximately 9,000 feet of overhead 3-phase line spanning approximately 33 poles. Upton sup. pf. at 1-2; exh. CVPS-TOU-7.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

8. The proposed project would not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the

land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 9 and 10, below.

9. The Town of Saint Albans and the Northeast Regional Planning Commission have both endorsed the project. Montagne pf. at 4; exhs. DRM-3 and DRM-4.

10. The town and regional plans both expressly encourage the development of renewable energy resources. Montagne pf. at 3-5.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

11. The proposed project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load management measures. This finding is supported by findings 12 and 13, below.

12. The output of the proposed generator would be needed in that it would be sold at wholesale to CVPS as part of the utility's voluntary renewable pricing program, which was developed to allow CVPS customers to elect to take power from renewable sources. If CVPS does not use the power to serve its customers, it can be sold at wholesale to meet regional need. Montagne pf. at 5-6.

13. CVPS's voluntary renewable pricing program is consistent with the goals of Act 61, which encourages and promotes development of renewable resources. Montagne pf. at 5-6.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

14. The proposed project would not adversely affect system stability and reliability. The Montagnes have been working with CVPS to ensure that the Project does not have any adverse impact on the CVPS system. CVPS has completed a system impact study which indicated that, with the improvements set forth in the study, the proposed project would not have any undue adverse impacts on system stability or reliability. Before the generator would become operable, CVPS would perform the upgrades in the study. Exh. DRM-5; Montagne pf. at 6.

Discussion: System Stability and Reliability

In its comments, the DPS noted that although the system impact study completed for the Project indicates that there would be no adverse impact to system stability and reliability, provided that the recommendations contained in the system impact study are followed, the details of some of the system protection schemes are left for the facilities study which to date has not been completed. The Department also notes that the Generation Interconnection Agreement, Operating Protocols, and Technical Requirements are not yet complete. Therefore, the Department recommends that the Board include a condition in the CPG requiring the Montagnes to file the Facilities Study, Generation Interconnection Agreement, and Operating Protocols and Technical Requirements with the Department as they become available.¹ We find this a reasonable recommendation, and will require the Montagnes to file these documents with the Department and the Board for approval. Any comments regarding these documents shall be filed with the Board within two weeks of the date the documents are received by the Board.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

15. The Project offers many economic benefits to the state and its residents. First, it offers a local source of renewable power which adds diversity to the state's energy mix and displaces fossil fuels. Second, the Project enhances the economic viability of the Montagnes' farm by reducing costs and generating additional income, thus increasing the likelihood that it would continue to be a healthy working farm. Third, various additional benefits, while not monetized, would provide indirect economic benefits. Among these, the Montagnes' neighbors would benefit because the manure they spread would have less odor as compared to current conditions. Additionally, the entire northwest region of Vermont would benefit since the digester process would reduce the phosphorous levels released into the ground and surface waters which would eventually flow into Lake Champlain. Finally, the Montagnes would also be removing methane, a significant greenhouse gas, from the atmosphere, by trapping it and burning it as fuel for the generator. Montagne pf. at 6-7.

1. Letter from Department dated March 7, 2007.

Discussion: Economic Benefit

The Department raised the concern that further studies required by the Project may result in costs that should be borne by the Montagnes and not by CVPS and recommends that a condition be included in the CPG that requires the Montagnes pay the entire cost of the distribution system upgrade.² The Montagnes have agreed that they would pay for the upgrade.³ We include this condition in our approval of the CPG.

**Aesthetics, Historic Sites, Air and Water Purity,
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

16. The modifications as proposed would not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and public health and safety. This finding is supported by findings 17 through 45 below, which are the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

17. As part of the grant process, the Montagnes received an assessment from the United States Department of Agricultural Rural Development that concludes that there are no significant environmental impacts of the Project. The only potential adverse impacts identified from the Project are (1) emissions from burning the methane, and (2) noise from the generator motor. There would be some minimal soil disturbance during construction as well as some construction waste. Exh. DRM-6; Montagne pf. at 7. These impacts are discussed below.

Outstanding Resource Waters

[10 V.S.A. § 1424(a)(d)]

18. The Project is not located on or near any Outstanding Resource Waters. The limited construction work would not have an impact on water quality or water supplies, wildlife, fish habitat or flood storage. There are no known rare or irreplaceable natural areas, or endangered species at the Project site. There are no known or potential archeological sites. The Project

2. Department letter of March 7, 2007.

3. Letter from counsel dated January 16, 2007.

would not have an effect on the existing or potential use of streams for recreation, research, or educational purposes. Montagne pf. at 11.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

19. The Project would not result in undue water or air pollution. This finding is supported by findings 20-24, below.

20. The Project would enable the conversion of raw manure to processed liquid manure. The processed liquid manure is inorganic and can be spread during the growing season, resulting in faster plant uptake and reduced potential for runoff. Montagne pf. at 2.

21. The proposed project is not located on any water resource identified by the Northwest Regional Planning Commission. Montagne pf. at 9.

22. The Project would reduce the release of methane gas. Montagne pf. at 7.

23. The Air Pollution Control Division of the Agency of Natural Resources issued an "Air Pollution Control Permit to Construct and Operate" to the Montagnes on December 1, 2006. Exh. DRM-7.

24. Noise impacts would be minimized by locating the generator inside the generator building. The Montagnes do not expect the noise to be perceptible to the general public. Montagne pf. at 8.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

25. The Project would not have an undue adverse impact on any headwaters, as there are no headwaters in the vicinity of the project. Montagne pf. at 8; Upton sup. pf. at 4.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

26. The Project would improve the disposal of cow manure waste over current practice, by producing a solid by-product (sawdust) that can be used as animal bedding and by eliminating

pathogens and odors from the remaining waste liquid that would be spread on fields. Some waste may occur during the construction process, but it would be disposed of in an approved landfill. Montagne pf. at 8.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

27. The Project would not involve the use of water either during or after construction. Montagne pf. at 8.

Floodways, Streams, and Shorelines

[10 V.S.A. §§ 6086(a)(1)(D)(E) & (F)]

28. The Project is not located within a floodway, on or adjacent to the banks of a stream or on a shoreline. Montagne pf. at 8; Upton sup. pf. at 4.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

29. The Project would not adversely affect any wetlands. This finding is supported by findings 30 and 31, below.

30. The Project would be constructed on farm property that has already been developed, and there are no mapped wetlands in the vicinity of the Project. Montagne pf. at 9; exh. DRM-8.

31. As to the distribution line, there is a Class 2 wetland located just east of the new line between poles 2 and 6. The wetland is located in the woodlot just south of Lower Newton Road that can be seen on the aerial photo. A small extension of this wetland juts into the alfalfa field near pole 4. No poles would be located in the wetland, and no equipment would be driven in the wetland. In addition, no tree cutting is required in the wetland or its 50-foot buffer. Because only one pole would be located within 50 feet of the wetland, and there would be no tree cutting or any impacts from construction equipment, the line would have no impact on wetland functions or values and is considered an Allowed Use under the Vermont Wetland Rules (meaning no

Conditional Use Determination is required). The proposed distribution line upgrade has been designed to avoid impacts to the wetland. Upton sup. pf. at 4-5.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

32. The Project would not use water during or after construction, and therefore would not place a burden on existing water supplies. Montagne pf. at 9.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

33. The Project would not cause unreasonable soil erosion or reduction in the capacity of the land to hold water. Montagne pf. at 9.

34. The only soil disturbance by the Project would be related to the construction of the digester and generator building. That disturbance would be minimal and would be managed by standard erosion control methods. Montagne pf. at 9.

35. The only earth disturbance by the distribution line would be limited to pole location and the poles would be located in actively planted agricultural fields. Upton supp. pf. at 4.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

36. The Project would not have an impact on any means of transportation. The Project would be located on an existing farm off a public road, and would not impede traffic in any way. Montagne pf. at 9.

37. Manure used by the Project will come solely from the Montagne farm and will not be transported from other farms. *Id.* at 2.

Educational Services

[10 V.S.A. § 6086(a)(6)]

38. The Project would have no impact on the ability of any municipality to provide educational services. Montagne pf. at 10.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

39. The Project would not require any municipal or governmental services. Montagne pf. at 10.

**Aesthetics, Historic Sites
and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

40. The Project would not have an undue adverse impact on the scenic or natural beauty of the area, aesthetics, historic sites, or rare and irreplaceable natural areas. This finding is supported by findings 41 through 43, below.

41. Because the Project would be constructed on farm property that has already been developed, the Project would have little or no visual or aesthetic impact. *Id.* at 2.

42. There are no historic sites or rare and irreplaceable natural areas that would be disturbed by the Project. Montagne pf. at 10; exh. DRM-8.

43. The aesthetic impacts of the distribution line upgrade would be minor. Given the slope of the land the proposed distribution lines would cross, the lines would not be visible from any distance for a traveler along Lower Newton Road. From the east, they would be visible only very briefly before giving way to views of New York, Lake Champlain, and the houses and camps along Maquam Shore Road. Traveling eastward on Lower Newton Road, the topography and a small patch of woods would form a backdrop for the line. Longer views to the east would still be seen once the traveler crests the rise in the road, beyond the new lines. From Maquam Shore Road views of the lines would be very limited. There are many houses in the foreground, and the topography and woods would provide a backdrop behind the lines. From the south, the lines

would be even less visible from Maquam Shore Road, because existing woods and hedgerows would hide them almost completely. From Perry Road these lines would be hidden by topography and existing vegetation, and therefore difficult to see for the first 3,000 – 3,500 feet. These sections would be located nearly a mile from Lower Newton Road, and therefore very difficult to see. From Maquam Shore Road, existing houses and topography would hide this section of line effectively, and the existing topography and woods would provide a backdrop. From the south, as with the northern segment, existing woods and hedgerows provide an even more solid screen for these sections. From Perry Road, these line sections would be largely obscured by existing trees and buildings for the most part. From the southern end of Perry Road, these poles would be visible, but they would be 350 feet from the nearest property boundary and approximately 1,300 feet from the nearest house. In addition, existing hedgerows and woods would provide a backdrop for the poles. Upton sup. pf. at 2-3.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

44. The Project would not have any impact on wildlife habitat or on any threatened or endangered species. Montagne pf. at 10.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

45. The Project would not unnecessarily or unreasonably endanger the public or quasi-public investment or government or public facilities. The only public investment near the Project is the road from which the farm is accessed. The Project would not affect the use of this road by the public. Montagne pf. at 10.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

46. The Montagnes do not distribute or transmit electricity for use by the public. Therefore, they are not obligated to prepare and submit for approval an integrated resource plan. *See*, Docket No. 7082, Order of 4/26/06 at 54.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

47. The Project is consistent with the Vermont Twenty Year Electric Plan. The Department of Public Service's 2004 Vermont Electric Plan recognizes the value to the state of renewable resources and cites to farm methane projects as potentially beneficial energy technologies. Montagne pf. at 11.

48. The Department filed a determination, in a letter filed March 7, 2007, that the proposed project is consistent with the Vermont Twenty-Year Electric Plan, in accordance with 30 V.S.A. §202(f). *See* Department letter filed March 7, 2007.

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

49. The Project is not located near any outstanding resource waters. Montagne pf. at 11.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

50. Subject to completion of the upgrades required in CVPS's system impact study, the Project would not have any adverse impacts on Vermont utilities or customers. *See* Department letter filed March 7, 2007.

III. CONCLUSION

Based upon all of the above evidence, we conclude that the proposed construction would be of limited size and scope; the petition does not raise a significant issue with respect to the

substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the proposed project would promote the general good of the state, subject to the four conditions discussed above and included below.

IV. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that the proposed project, in accordance with the evidence and plans presented in this proceeding, would promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good shall be issued in the matter, subject to the following conditions:

1. The Project shall be constructed in accordance with the evidence and plans submitted in this proceeding, including the letter dated January 16, 2007, filed on behalf of the Montagnes in response to the Board's information request.
2. The Montagnes shall pay the entire cost of the distribution system upgrades.
3. The Montagnes shall file the Facilities Study, Generation Interconnection Agreement, and Operating Protocols and Technical Requirements with the Department of Public Service and the Board for approval as they become available. Any comments on these documents shall be filed within two weeks from the date they are filed with the Board.
4. The Montagnes shall not transport any manure or other substrate for use in the digester without prior approval from the Board.

Dated at Montpelier, Vermont this 8th day of June, 2007.

<u>s/James Volz</u>)	
)	PUBLIC SERVICE
)	
<u>s/David C. Coen</u>)	BOARD
)	
)	OF VERMONT
<u>s/John D. Burke</u>)	

OFFICE OF THE CLERK

FILED: June 8, 2007

ATTEST: s/Susan M. Hudson
Clerk of the Board

Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.